



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
RISK REDUCTION ENGINEERING LABORATORY
CINCINNATI, OHIO 45266

38 1470



DATE: November 23, 1992

SUBJECT: Technical Review of "Remedial Technologies, Alternatives Screening Technical Memorandum, for the McIntosh Plant Site, Olin Corporation, McIntosh, Alabama" Dated October 1992.

FROM: Mark C. Meckes
START Team Leader
Regional Support Section

TO: Cheryl W. Smith
Senior Remedial Project Manager
Region 4

The subject document is technical memorandum which seeks to develop general response actions, identify, screen and select remedial technologies and process options, and assemble remedial alternatives.

The proposed general response actions (GRA)s are found in Section 3 and within Table 5. These actions are based upon Remedial Action Objectives (RAOs) which are included in this table. It appears that the RAOs were constructed by the authors based upon a review of ARARs for the site. However, it is not clear to me that Region 4 has concurred with these objectives. Therefore, my review was based upon the assumption that the proposed GROs are acceptable to Region 4. Given this assumption the proposed GRAs are acceptable.

Section 4 is an evaluation of remedial technologies and process options. Candidate technologies for Operable Units 1 and 2 appear in Appendix A of the subject document. The technologies considered are those which would be most applicable for site remediation. Other technologies could have been considered. However, it would be unlikely that other technologies would be as effective in site remediation, as those presented here.

Screening of technologies is presented in Tables 6, 7, and 8. These appear to be complete, and the screening rational appears to be logical.

An evaluation of process options for groundwater, and soil from OU-1 and for sediments from OU-2 were conducted by the authors. This evaluation was based upon what the authors perceptions of effectiveness, implementability, and cost for a given treatment were. The evaluation appears in tables 9, 10, and 11. This evaluation appears to be reasonable. However, I would suggest that the authors evaluate solvent extraction as a technology as opposed to listing various vendors of solvent extraction equipment. The implication is that only the vendors listed have the capability of treating these wastes. This may not be true.

Section 5 is where the authors develop remedial action alternatives. Since this submittal is in the form of a memorandum and it is not the feasibility study (FS), it is my assumption that the PRP is seeking feedback from the Agency regarding these alternatives prior to submitting them as part of the FS. The alternatives specified in this section lack detail. I believe that this is not a problem at this time. However, further work is necessary to better describe what is intended as a remedial action alternative. For example at the bottom of page 40 the author describes three groundwater alternatives. Each are modifications of the existing CAP. The author then states that options C1 through C3 include adding extraction wells, and, in the case of C2, adding an injection well. We are not told where these wells will be located. Furthermore, we are told that treatment processes, including precipitation, carbon adsorption, and air or steam stripping will be considered. Will all proposed wells be considered for the same treatment process(s)? The development of remedial actions needs additional work. As presented, I am uncertain that all the technologies retained following screening are being addressed here. The author's statement in the last paragraph on page 49 puts the entire section in perspective. "Although this memorandum defines specific alternatives assembled from retained technologies and process options, these alternatives are subject to change as the RI/FS progresses". This being the case, I find that the initial screening work presented in this memorandum appears to be adequate.

I realize both solidification/stabilization and thermal treatments are being considered for treatability testing. However, it appears that solvent extraction has been retained following the screening process. Solvent extraction will not be effective in removing mercury unless the mercury is an organomercury compound. Therefore, if solvent extraction continues to be retained for future consideration, a treatability study must be conducted, to determine its applicability to these wastes.

If you have questions regarding this review, please call me at (513) 569-7348.